30th Anniversary

WATER EDUCATION FOUNDATION

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October 4, 2007

Delta Vision Blue Ribbon Task Force
650 Capitol Mall
Sacramento, CA 95814

Dear Task Force Members,

You may know that the Water Education Foundation is conducting a series of informational workshops around the state on Delta Vision issues. Our most recent workshop was held July 27 in Fresno. The next Delta Vision Workshop will be December 5 in San Jose.

A key part of each workshop is input from the local community as well as from stakeholders from the water, governmental, business and public interest sectors. This input is generated through self-facilitated audience participation breakout groups. After each workshop we summarize these breakout groups' oral and written reports in addition to the key points made by the speakers. The complete workshop summaries are posted on our web page: http://www.watereducation.org/deltavisionworkshops.asp so everyone interested in the Delta can hear various points of view on key Delta issues.

We have created a **short summary of this community/stakeholder input** for your perusal from the July workshop. Attached are that summary document, the agenda, list of participants, and workshop summary that we are posting on our web site.

We hope this information will be useful to you as you proceed with your work.

Sincerely,

Rita Schmidt Sudman
Executive Director

Encl.

Water Education Foundation's Delta Vision Workshop
July 27, 2007
Summary of Stakeholder Input

With the backdrop of the water project pumps vs. Delta smelt issue looming in the background, participants at the Water Education Foundation's July 27 Delta Vision Workshop in Fresno expressed the need for action on a Delta solution sooner rather than later. "We need to get across the sense of urgency. The May 31 pump curtailment – if the shutdown had been any longer it would have been devastating," one stakeholder breakout group said.

While a solution that includes some sort of conveyance facility as well as increased storage and ecosystem restoration was most preferred, the participants stressed that the solution should be flexible to adapt to changing conditions. Participants expressed concerns about growth and water supplies and the fact that the "Delta cannot be all things to all people" and that one dilemma is "who will the Delta serve? The whole state vs. local areas." One solution might be the governance structure recommended by several groups – a Delta conservancy to make policy on a regional level.

The July 27 workshop focused on the value of the Delta to the Central Valley and how to develop a vision; a highlight was the audience's opportunity to hear from Blue Ribbon Task Force Vice Chair Sunne Wright McPeak. A panel discussion related to the current water project pumps/Delta smelt crisis provided a real-life example of the need for better management of the Delta's dual water supply/ecosystem functions. Agenda items also included a presentation on the Delta Risk Management Strategy (DRMS) and a presentation by Congressman Jim Costa on the "view from the valley."

The Foundation selected Fresno for its third Delta Vision workshop to provide this important region with an opportunity to hear about the state-managed effort to craft a Delta vision, and provide members of the Task Force with input from the San Joaquin Valley. Stakeholders in attendance included local and state governmental officials, elected officials and/or their representatives, water agency staff, environmentalists, consultants, farm managers, attorneys and local business people.

Participants were assigned to small, self-facilitated breakout groups for a working lunch. The groups were asked to address three questions:

- Based on what you know and what you've heard today about risks to the Delta and the importance of the Delta to the Central Valley, what are your ideas about how to reduce risks to the Delta?
- Identify and discuss strategies that might be appropriate for the Central Valley to reduce water demand while maintaining a strong economic base, thereby leaving more water to address Delta ecosystem concerns.
- What would you want the Delta Vision Blue Ribbon Task Force to know about your sense of a vision for the future of the Delta?

The participant breakout groups' written and oral reports show several common themes:

To reduce risks to the Delta, participants urged the parties to "cooperate rather than have solutions imposed by (the) courts or Legislature" and pushed for broad involvement in the issue: "Integrate all interests: environment, farmers, the public, etc." There was strong stakeholder support for building an isolated facility or Peripheral Canal, as well as increased groundwater and surface water storage.

Other ideas:

- State landscape ordinance to reduce amount of water used on urban landscaping
- Control urbanization in Delta
- Farming may be inconsistent with levees – perhaps buy out and rehabilitate peat
- Decrease exports
- Identify most vulnerable islands and take steps to protect
- Impose stricter discharge standards (currently secondary treatment)
- Prevent introduction of additional invasive species
- Additional offstream storage and backups
- Reduce continued subsidence of deep Delta islands
- Greater use of reclaimed water
- Charge water rates commensurate with water delivery costs

When it came to identifying strategies that might help the Central Valley reduce water demand while maintaining a strong economic base and providing more water for the ecosystem, some said the question reflected an environmental bias. "The environment already is the single largest user of water in the state – how is the environment using water? Should the X2 standard be maintained in the Delta? The Wild and Scenic Rivers system wastes a lot of water – a lot of water flows out of the state and is not serving any beneficial use," one table said. Another noted that "Water conveyance should focus on delivering quantities various governments have contracted to deliver. Focus should also be on efficient water use by environment."

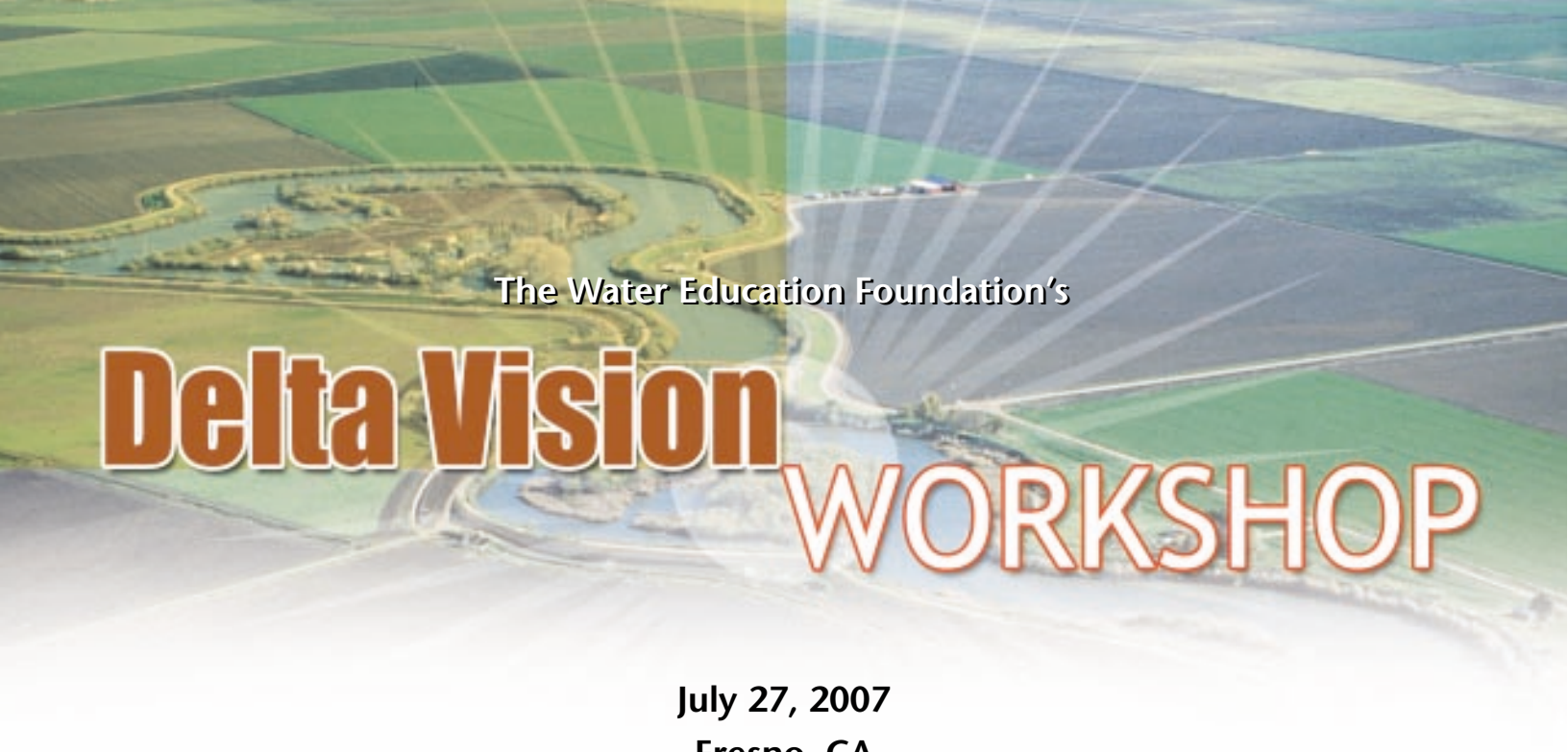
All groups came up with a long list of innovative ideas for reducing water use identifying both voluntary and mandatory measures. Specific ideas:

- Cash for grass – pay people to plant alternative landscaping
- Tax incentives for commercial use of low-flow plumbing fixtures
- Mandating use of gray water outside
- Increase investment in R&D programs
- Invest in new technologies
- Establish a rotational fallowing plan funded by the public to take seasonal crops out of production during droughts
- Increasing and promoting infill and smart growth, protecting prime ag land and reducing residential water use
- Increasing funding for integrated regional water management planning
- Groundwater banking and recharge
- Increase water reclamation and reuse
- Drought tolerant plants and landscape with smart controllers and metering for all urban uses

When asked what the participants wanted the Blue Ribbon Task Force to know about their visions for the future of the Delta, water conveyance was again a common theme. “California is different than it was in 1982 – build the Peripheral Canal; build surface storage north of the Delta,” one table said. Trust and cooperation were identified more than once. “(We) need action, but we need to develop a sense of trust with Northern, Central and Southern California.”

Other input offered by the participants:

- Need a solid plan and how to finance it. Need to work out “beneficiary pays” in an agreeable and fair way
- Time to move forward – put politics aside
- Peripheral canal and above-ground storage will solve a lot of problems
- Restrict building in the floodplain
- Don’t waste time! Don’t overanalyze, begin implementation now.
- Restore the Delta to a more natural state.
- Consider moratorium on residential development until Delta issues resolved.
- Ensure reliable water supply. If risk goes unabated, private sector financing and insurance will be more difficult.



The Water Education Foundation's

Delta Vision WORKSHOP

July 27, 2007
Fresno, CA

Sponsored by:
Water Education Foundation

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CONFERENCE SUMMARY

Prepared by the

WATER EDUCATION FOUNDATION

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The agenda for the Delta Vision Workshop was developed by the Water Education Foundation with input from an advisory committee:

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Brent Walthall, *Kern County Water Agency*
Tom Zuckerman, *Central Delta Water Agency*
Greg Zlotnick, *Santa Clara Valley Water District*

Staff from the Water Education Foundation took notes throughout the Delta Vision Workshop for the preparation of this document. ***Please note that this is not a word-for-word transcript. It is a summary of the major points of discussion among the speakers and a summary of the self-facilitated participant breakout groups.***

The PowerPoint presentations presented at the July 27 workshop can be found on the Foundation's web site http://www.watereducation.org/Deltavisionworkshops

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WATER EDUCATION FOUNDATION

Welcome and Opening Remarks

Rita Schmidt Sudman, Executive Director, Water Education Foundation, welcomed participants and acknowledged the California Resources Agency as co-sponsor of the Delta Vision workshops. She told attendees that there will be two more Delta Vision workshops – one this year and another in early 2008 – in an effort to help Californians develop a sustainable Delta. She advised participants that the workshop agenda was developed in consultation with an advisory committee representing various stakeholder viewpoints. She explained that the Foundation is a nonprofit, impartial organization dedicated to educating the public about water issues and trying to resolve water problems through educational programs. She provided a brief overview of the issues facing the Delta and explained that the Delta Vision process is attempting to go beyond Delta water to also examine ways that land use and other issues will shape the Delta.

The Importance of the Delta: The View from the Valley

Congressman Jim Costa, who spoke to participants via phone hook-up from Washington, D.C. where he was on the House floor voting on the 2007 Farm Bill, commended the Foundation on the work it does and noted that it is known in California and the nation for its fair and balanced look at water issues.

He noted that there are a couple of areas that relate to water in the Farm Bill not available in previous Farm Bills that expand opportunities to participate in water conservation programs. The importance of the Delta, developing a Delta vision and assessing risks to the Delta and the DRMS in addition to workshops in the value of the Delta and why we need a new vision. All of these are key elements.

He noted that he has closely worked on water issues since his time in the Legislature in the 1980s. Balancing water resources is critical to the success of California. We all know that water is the lifeblood of the California economy and the state has been living off the investments made in water in the 19th and 20th centuries. All of us are here because you not only understand that but understand that the Sacramento-San Joaquin River Delta is an immensely valuable resource for sportsmen, fishermen, farmers and cities. The Delta is the linchpin of California's plumbing and water management systems; it provides the mechanism for bringing water from Northern California to the Central Valley and Southern California. The congressman noted the constant criticism of water delivery to the southern part of state, but said is it is a key component of how we manage California's water delivery system.

The health of the Delta is the key issue. But we've known that the health of the Delta was being impacted because of all the demands we place on the Delta. But it is completely wrong to blame all Delta health problems on the export of water. There are numerous factors at play including:

- The population of the Delta has quadrupled in the last 20 years. The population in and around the Delta has had an impact.
- There are over 1,800 in-Delta water diversions that are unscreened and account for as much water as is exported south of the Delta with the CVP.

- Runoff issues from farming and urban growth.
- The invasive foreign species that have come into the Delta the last three to four decades through ship ballast water.
- Subsidence of the islands and erosion of the levees.

He recounted political efforts to deal with the Delta's issues including the water bonds – Propositions 204 and 13 – all under the heading that "we'll all get better together." The Central Valley Project Improvement Act had a provision in it for an Environmental Water Account that dedicated 800,000 acre feet of water to the ecosystem.

He said his greatest frustration through all those efforts is that the divisive nature of water politics have prevented us from coming together and reaching comprehensive solutions not just on the policy but the infrastructure fixes that are absolutely critical if we are going to solve these problems in the 21st century and allow California to continue to grow. If we don't have a resolution to these issues we will continue to have very difficult circumstances in California.

Balancing water resources is critical to the success of California. We all know that water is the lifeblood of the California economy and the state has been living off the investments made in water in the 19th and 20th centuries.

– Congressman Jim Costa

The congressman said the Delta Vision Workshop is important because it brings diverse groups together to have thoughtful dialog and figure out how to deal with these divisive issues and figure out as a state what's in everyone's best interests. He reiterated that the Delta will only get fixed when we all work together.

Sudman: What do you think about the Governor's proposed $5.8 billion bond measure that would include money for surface reservoirs and some sort of "Peripheral Canal." And the Democrats' proposal for a bond issue that would include money for groundwater recharge and conservation but no new surface storage or conveyance. What are your thoughts on these proposed bond measures?

Costa: The separate bond proposals coming from the Legislature and the Governor are a good sign that leadership is recognizing a problem exists. The solutions from the various perspectives are different. But as I told Congressman Miller, you can't solve the problem by blaming every other region for your problems. That only continues to divide the regions of California and make it more difficult to solve these problems.

I know it's difficult for elected officials in the Delta area because of issues that we are very familiar with, but I really believe that climate change is occurring. If you take even the most conservative estimates, the sea level in the Delta could rise 1 foot in the next 30 years, which, combined with a horrific storm, could result in a massive levee failure. There is a 25 percent chance that there will be a 6.8-7.0 magnitude earthquake in the next 50 years in the Delta, which would destroy many islands. Whether it's climate change or a seismic event that will happen at some point, we need to do the right thing and come together to solve the problems. The two bonds mean we need to come together and figure out how to solve the problems.

Question from the Audience: It seems like the Reclamation Board is broken as well as the Delta, referring to the appointment of a new Board two years ago. What do you think about reforming the governance structure of the state Reclamation Board?

Costa: Detailed an ACWA proposal that was led by Steve Hall to create a governing entity in the Delta. I'm not for precluding any idea that will allow us to get trust and credibility among regions that have been suspicious of each other's water motivations.

Question from the Audience: The Army Corps of Engineers has a flood control mandate and authorization to spend $90 million to improve the levees in the Delta but they have no funding allocation. Reclamation draws millions of acre feet of water out of the Delta but they divorce themselves from the conveyance issue. What is the federal role in the Delta and how do we move it forward?

Costa: You described the problem. When we put CALFED together, it was all to try to figure out how to get these overlapping agencies both on the federal and state level and the local entities to come together to deal within their jurisdictional differences and their disputes on their responsibilities as it relates to the Delta. I think we made good progress over the last 10-15 years and notwithstanding CALFED's challenges, we have a thoughtful effort to coordinate the roles and responsibilities of DWR, Reclamation and the Corps. But it doesn't help when Congress authorizes spending for the issues you mentioned but then does not appropriate the money. That puts a strain on everyone else's responsibilities. With the CVP and the SWP, the federal government has a very important role to play – primarily through Reclamation and the Corps. But with the responsibilities divided, it makes it more difficult to bring the different elements together to make sure they have the funding to carry out their responsibilities. But we also have to agree to the long-term fixes because we've done a lot of patchwork fixes over the last 20 years. And that's why getting a comprehensive agreement is critical to the long-term health of California and its water needs. •

Developing a Delta Vision

Sunne McPeak opened her comments by stating that she agreed with Congressman Costa that the assembled group was fortunate to have the Foundation bringing reliable, non-political information on water issues to the people in the Central Valley. She stated that she and Costa have spent a lifetime working on California water issues and it is clear that the San Joaquin Valley is important in every dimension to California. She said her deep lament is that after 30 years of working on the issue, the water situation in California is not fixed. The politics have created such a high hurdle – and it is essential that people come together. There is no substitute for people coming together to effect change.

There is a good chance that we will break down and default to the "politics of no" as opposed to the "politics of yes;" it's at least 10 times harder to get to the "politics of yes." The only thing that breaks through that is the people. It's the building of enough people who say: "It's time to get something done." We are relying on the people here in this room and in these other workshops to hold us accountable. All of you have to be so clear and adamant that the time has run out for this state; we must have a workable solution.

The San Joaquin Valley is in a new position of focus, importance and power because of the leadership locally with members of Congress getting an executive order from the president to focus on the valley. And the state legislative delegation working to get a gubernatorial executive order to focus on the eight counties of the San Joaquin Valley – to raise the potential of this region and focus on the valley as California's 21st century opportunity.

The governor created the California Partnership for the San Joaquin Valley to develop a strategic plan for its economic future. We submitted a strategic plan last year and the commitment is real to focus on this region in the future. Water is part of that plan. That effort matches the state's effort to not only have solutions statewide but to support and encourage regional plans to talk about water resources region by region. I want this visioning workshop for the state's Delta Vision process to take your input and I want to encourage you to work together with your water leaders, the California Partnership for the San Joaquin Valley, your state legislators and your congressional delegation. I point this out because the federal and state agencies and the water interests need to work together to succeed.

The Delta Vision Process took a long time in coming together. Through an executive order, the governor created

Sunne McPeak

the Blue Ribbon Task Force that includes seven members, including myself. There is in addition to that an oversight committee of four cabinet members, the president of the Public Utilities Commission and a scientific panel. The order calls for the task force to deliver a vision to the governor and the legislature by the beginning of 2008 and deliver an implementation plan of that vision by October 2008.

The Governor is personally and deeply committed to solving a lot of infrastructure problems and especially water. He has a sense of urgency. She said she shares efforts to accelerate the process and expects a lot of interesting debate. But that debate better not be just a political solution but one that works for the economy and all regions.

McPeak went on to detail her long history in and around water in California, how she grew up on a small dairy farm in the valley and fished on the Merced River. I spent my adult life in the Delta in Contra Costa and Alameda counties. My perspective: in order for the Central Valley to prosper, we can't let environmental asset be destroyed. I

also come at this with the understanding that the Delta will never be protected and preserved if the rest of California's water needs are not met. No matter what laws you might write, those will never hold water if the rest of the state is thirsty. If the rest of the state's economy or quality of life is at risk. We have to have a solution that works for everybody.

I'm in a listening mode, a learning mode as a member of the Blue Ribbon Task Force. But I do have a suggested approach for three working principles:

1) The Delta estuary needs to be protected and preserved.

2) We need a comprehensive solution combining conservation and construction.

3) Storage and conveyance have to be combined.

In terms of the estuary being protected, I'm talking about the ecological asset that supports fishing, wildlife. I'm not talking about physical configuration as we know it today. When most people say the Delta is unsustainable I think they're talking about the levees, the islands, the conveyance that doesn't work. The water supply for all of California depends on the quality of the Delta. I don't think they're talking about giving up on that very important estuary and the ecologic dynamic that supports all the fish.

The Delta will never be protected and preserved if the rest of the California's water needs are not met. No matter what laws you might write, those will never hold water if the rest of the state is thirsty.

– Sunne McPeak, Delta Vision Blue Ribbon Task Force

I said we need a comprehensive solution combining conservation and construction. I use those two "c"s to mean just about everything. Some people will argue that we can do it all with water efficiency – that's not true. Some people will argue that we can do it all with facilities, that's not true. You need both. If we don't try to value and preserve every drop of water we can, shame on us. We need to manage the watershed in a more efficient manner. … We have a lot of rivers that are dammed. But we need reservoirs to capture water when it is available; we need them to capture water that you want to put underground because you can't recharge groundwater aquifers fast enough to keep up with rainfall.

The conveyance as it is configured is not the only reason for the fish decline, but it has contributed to it. That status quo has to be rejected and we have to go to better conveyance. We will have a debate – is it isolated, not isolated, a combination. That's my third point: the construction of new storage and conveyance structures need to be intertwined.

McPeak stated that voters are smart enough to see these three suggested principals will get us to a solution that works for the whole state. She reiterated that all regions in California have to agree and benefit. The Delta Vision Blue Ribbon Task Force really wants to hear from people. The entire future of California relies on the creation of a good water management plan.

Sudman: You were once opposed to the Peripheral Canal. Is there anyway you could support some type of a Peripheral Canal?

McPeak: I have supported some approach of isolated transfer, if you want to call that a Peripheral Canal. I am on record in 1998 in support of some type of conveyance that protects the estuary and looked for another way to meet the state's water needs.

I opposed SB 200 in 1979 because there wasn't an ironclad commitment to protecting the estuary and it didn't have all the efficiencies in it; they uncoupled the timing of the canal and storage. That's why I said you don't want to uncouple the canal and storage. In those days anybody in Contra Costa County who talked about not opposing SB 200 was risking a lot of political capital. I actually thought that the prospect of Northern California getting a good deal out of SB 200 was slim. The best thing we could do is that the canal wouldn't be operated until there was at least one storage facility on line. I won a concession from the Board of Supervisors that Contra Costa County would go neutral if they (authors of SB 200) would accept this amendment that the canal wouldn't be operated until one of the major storage facilities came on line. I went to the last legislative committee hearing and offered that amendment. Why would we do that? It seemed to me that until you have the storage to actually capture water that is truly surplus, if you did nothing but build that ditch. I want to tell you it was a pretty big ditch. The proposed canal at that time was 43-miles-long, 40-feet-wide, 3-stories-deep, had the capacity to take 80 percent of the Sacramento River and had no fish screens. If you built that without storage I could only conclude that if you had the capacity to take 80 percent of the river with no conservation we would end up with no water in the Delta. That's what pushed us over the edge – that we couldn't get the canal and storage coupled. I guarantee you there wouldn't have been a referendum on SB 200 had we not let it happen.

As for today, there has always been this issue of "can we trust each other?" That's why the solution has to be comprehensive so all needs are met. The conveyance improvement has to be pretty big in order to convey a lot

of water when it is surplus and if it's improperly operated it will be the death knell for the Delta. That's why we finally negotiated in 1998 that we needed to have the possibility of isolated and non-isolated conveyance and the Delta environment managed adaptively. We need to use the science to look at the water quality and ecosystem issues and start immediately with using the through-Delta conveyance – to open up some channels so you don't have as much reverse flows; to put some rip rap in the right places. Then continue to monitor the improvements in water quality and water supply reliability and if we can't meet those, appropriately size the isolated facility or pipeline. Start those studies on the isolated facility immediately. That was the approach called for in the 2000 Record of Decision for CALFED. That's the law. What really irritates me is that once it was adopted we did not have the leadership in the state or at the federal government to implement that. There's no reason we should be here in 2007 trying to make a decision when there should have been all this action.

Question from the Audience: One of the things that valley ag leaders are always proud of is our positive contribution to balance of trade to the state and nation. What are some of the infrastructure facilities other than water being looked at in Delta Vision?

McPeak: The governor's executive order has nine elements for us to look at. The environment; the facilities that run through the Delta, road and rail; utilities gas pipelines; recreation; export value; the economy; all of those facets in the Delta or run it through the Delta that the task force is to address. The shipping between the Stockton and Sacramento ports and the Port of Oakland are very essential. Most of our ag products go out through those ports not through Long Beach or Los Angeles. Just to keep up our balance of trade we would be foolhardy in California to give up on our ag sector. Don't grow shopping centers and houses on our best soil. We don't have to put them on the fields we are currently growing crops on. We need to bring together land use with the water supply.

In terms of those infrastructure items… I was there when Upper Jones broke. It was a spontaneous failure. There had been high winds and high tides the day before and probability wise there is a greater chance of failure of a levee from high tides or flooding or from earthquake. But with earthquake, the risk is catastrophic failure of several levees simultaneously. The rail and pipeline are right there between Upper and Lower Jones tracts. And the Mokelumne Aqueduct sits right there, too. … I don't think that the primary function of those levees is to protect what's on the inside. Those levees define areas that take up space in the estuary. If the placeholders weren't there it would require more fresh water to keep the estuary environment. You can have a system of levees that do define areas farming and ecological that define habitat for the fisheries those levee systems have a benefit for both the environment and the exports. You can't just write off the levees because an inland sea won't support the fishery. •

Assessing Risks to the Delta: The Delta Risk Management Strategy

Note: Refer to the Foundation's web site, http://www.watereducation.org/deltavisionworkshops.asp, to view Dave Mraz's PowerPoint presentation

Dave Mraz opened by stating that he hoped to provide some light on the purpose of the Delta Risk Management Strategy (DRMS). He noted that Congressman Costa talked about the need to develop a long-term vision for the Delta and all of the things it does for the state of California and being able to understand it so we can solve the problems Sunne McPeak talked about protecting and preserving the Delta and a comprehensive solution for the water supply and the ecology. He said he wanted to talk about how the Department of Water Resources is addressing these issues. He said that many agencies have worked on DRMS including DWR, the Department of Fish & Game and the U.S. Army Corps of Engineers.

Dave presented a slide showing how the relative size of Delta is small compared to California, but it has huge implications – 23 million Californians receive water from the Delta and 3 million acres of agriculture is supplied with Delta water. Related that other valuable infrastructure is in the Delta such as highways, natural gas pipelines, etc.

He talked about the problems of land subsidence. Talked about levee subsidence. Gave Bradford Island as an example – the rim of the island is the only land that is above sea level. The rest of island has subsided 15 to 20 feet. The land is still used to grow crops, people and habitat. That space that is now occupied by the land surface would be occupied by fresh or brackish water if those levees weren't there.

He noted that there have been lots of efforts over the years to make decisions for the Delta. Sometimes decisions were made that did not consider everything; other times decisions were made with limited information.

In 2000 the CALFED ROD called for a risk assessment. The Delta Risk Management Strategy (DRMS) is being completed in two phases. Phase 1 is the risk and consequence assessment. Phase 2 will be development of the mitigation measures. As directed in AB 1200 (Laird), DRMS looks at certain "loadings" and strategies to sustain the Delta 50, 100, and 200 years into the future. The loadings under consideration include overtopping, winds and waves, sea level rise and sunny day failures. Mraz noted how the sea has risen at the Golden Gate the last 100 years by 6/10 of a foot. It has to be factored into any solution in the Delta. The most severe loading they have to consider is the seismic risk. DRMS' study area expands beyond the Delta and into Suisun Marsh.

Dave Mraz

He noted that the Delta Vision process is a public and political process intended to get input from stakeholders. DRMS is a technical study that will inform Delta Vision and will be one many reports the Blue Ribbon Task Force will take into consideration.

DWR had 18 months to complete the DRMS study. Could not initiate any new studies, had to use existing information and studies that were available. One exception: seismic activity in the Delta. Worked closely with USGS and others to incorporate the latest information on seismic issues and their impact on the Delta. Took extra time to study the faults and determine their risk. (Showed fault map.) The Midland Fault line is the area of most concern as it runs right through the Delta.

For Phase 1, DRMS looked at "business as usual" for its projections. The work was broken down into 13 categories ranging from levee vulnerability to emergency response and repair. The risk analysis is the model of the Delta we have been building so we can look at business as usual and mitigation measures. Teams were assigned to look at ecosystems, climate change, earthquake, economic impacts, etc. Each team built a model based on their particular discipline and consulted with other to inform each others' projects.

Levee fragility. The levees were broken into 23 classes depending on foundation, material used for construction, depth of peat, geometry, etc. Each island might have five different classes of levees. DWR then looked at water management and hydrodynamics and water quality and translated that into an economic impact. The DRMS Phase 1 report is scheduled for release on July 31, 2007. CALFED will then provide an independent review of the report. The information in the report is based on "business as usual." Based on that, over the next 100 years there would be 200 levee system failures compared to 160 failures historically. There is a significant chance for 30 or more simultaneous levee failures due to seismic activity. Once that seismic event occurs, it would cause the levees to melt away – this would be a much bigger deal than closing the breech and pumping the water out; you have to repair the entire levee system.

A major seismic event would leave water supply vulnerable, with no exports for up to two years except during periods of incredibly high flows – creating a major impact on Southern California and farming communities. A seismic event could benefit the ecosystem. It would depend on the species and how it would happen.

The Phase 2 Report will look at cost benefit ratios using the risk model developed in Phase 1. Some things they're looking at: improved maintenance, upgrading the levees, pre-flooding some islands, improvement of riparian corridors and reducing water exports.

These actions were assembled into three trial scenarios that will be presented to the Delta Vision workgroup when they are completed. We're looking at:

- improving the levees system-wide – what that costs and affects on various interests
- an armored "pathway" for water conveyance to protect existing water corridors so they can withstand a seismic event
- an isolated facility

The Phase 2 Report will be put into the same model as Phase 1 to see how they affect levee fragility, hydrodynamics, water supply, water quality and ecosystem, and come out with our economic evaluation. The ultimate end is an evaluation of risk reduction methods and management strategies. The goal is to inform Delta Vision Task Force and the Delta community at large about what can be done to sustain the Delta.

A major seismic event would leave water supply vulnerable, with no exports for up to two years except during periods of incredibly high flows – creating a major impact on Southern California and farming communities.

– Dave Mraz, DWR

According to AB 1200, DWR must judge the effectiveness of these scenarios on water supply reliability, water quality and improvements in flood protection. We will work with the Department of Fish and Game to determine which of the most measures will preserve the environment. The Phase 2 report is due Jan. 1, 2008.

Closing remark: Do nothing and the Delta succumbs to climate change and sea level rise.

Question from the Audience: The focus of the three strategies seems narrow compared to the 13 mitigation strategies (team breakdown areas). Can you explain?

Mraz: The strategies are the individual building blocks that can be applied to the 13 mitigation areas. All of those will be put into the package that we run through the DRMS analysis to see the impacts on water quality, water supply, flood protection and the environment to analyze that scenario as a whole – and the economics of the strategy.

Question from the Audience: There has been reporting in the national news about the Army Corps of Engineers edict to denude levees of trees to enhance flow vs. the California practice of planting trees to strengthen levees and provide habitat.

Mraz: That is a huge controversy at DWR right now. The last remaining riparian corridors in the state are threatened. DWR has requested a variance to the rule of denuding levees. We're trying to understand how we can accommodate the vegetation and improve the flood control system at the same time. One option is to create a secondary (setback) levee 100 yards behind the existing levee. This would also afford broader flood control. •

The Crisis in the Delta: What Does It Mean for a Long-Term Delta Vision?

Panelists, L to R: Ara Azhderian, San Luis and Delta-Mendota Water Authority; Dale Myers, Zone 7 Water Agency; Dale Melville, Dudley Ridge Water District; Richard Roos-Collins, Natural Heritage Institute and Moderator Tom Philp, MWD of Southern California

Moderator Tom Philp: Although the word "crisis" can be overused; it's a noun that can be used accurately for what's going on in the Delta today. Asked the panelists to introduce themselves and remark on the Delta crisis.

Ara Azhderian: Introduced himself as the Water Policy Administrator for the San Luis and Delta-Mendota Water Authority. Explained that his organization was formed in 1992, and operates and maintains the federal Jones Pumping Plant. The agency serves 32 member agencies, providing water to 1.3 million acres of farmland, 2 million urban users and water management/waterfowl areas near Los Banos. What is common between all 32 member agencies? They rely on water moving through Delta to meet their needs.

The silver lining of the Delta crisis is that there is a broadening awareness of the Achilles heel in California water and the need for urgency. However, the response to the crises leaves the outcome in question. The response to the Delta crisis can either be profoundly important or irrelevant. What do I mean by that? The way the projects operate is in question right now. For the moment, the response seems to be "Let's do a lot more of the same." This approach is driven by the belief that water projects are the spawn of all evil. The degree you can curtail their operations will result in a reciprocal ecosystem benefit. Clearly project operations have an effect on the ecosystem but there are a lot of other things going on today. Delta smelt, for example, are impacted by other factors than project operations, including invasive species and development. If we're going to come up with a solution, we need to step back and be more holistic in our approach and acknowledge and address the fact that there are many other things going on.

When we talk about a Delta crisis what do we mean? The west side of the San Joaquin Valley sees two potentials:

No. 1 – the demise of the Delta smelt; No. 2 – the chaos of near-term fish actions – it is an avoidable chaos; we don't need to be creating problems.

A myopic focus on project operations will not lead to meaningful or sustainable solutions for the Delta and the consequences of such an approach are enormous. Two-thirds of all Californians rely on the Delta for some of their water. But it's important to note that for six weeks a year, most of the nation's lettuce comes from Westlands Water District. On a larger scale, 45 percent of our nation's fruits and vegetables are produced in the San Joaquin Valley. Water project operations make this possible. The initial response to the crisis does not bode well. I would like to see a response with hope and intent – to have people get inspired by the crisis to respond creatively, comprehensively and collaboratively for the ecosystem and the health and welfare of the millions of people who rely on the Delta.

He closed with an Einstein quote perfect for Delta crisis response up until now: "The definition of insanity is to do the same thing over and over and expect a different outcome."

Dale Myers: Introduced himself as the former General Manager of the Zone 7 Water Agency. Explained that the Zone 7 Water Agency was established in 1957 and was superimposed over an existing flood district. It serves 200,000 people in the cities of Dublin, Livermore and Pleasanton. Zone 7 was the first state water contractor. It gets 80 percent of its water supplies from the Delta. We have invested in groundwater recharge facilities in anticipation of a natural emergency we would be able to provide a maximum amount of water to our customers. Our customers accept higher charges to ensure reliability of water supplies and invest in new treatment facilities, etc.

Said he recently read the "By Design" science report by Jeff Mount and Bob Twiss and the book "Nam" by Mark Baker. He outlined basic management practices used in fighting war:

- Evaluate the success of your solution: live or die. No water, no life, no $400 billion economy. No species.
- You need adequate and coordinated resources to deploy against your adversary.
- Know your enemy. The enemy is not the water agencies, it's not the customer, it's not the farmers, it's not the boaters – it's the inevitable march of time and change.
- You need the ability to respond quickly and adequately in different circumstances. The system needs to be flexible to respond to the future.
- You need resourceful and knowledgeable command staff. And hopefully they have a sense of comfort with change. I am not a believer of consensus. I think it is too cautious and too slow.
- You need able, willing and skilled personnel. Scientists, economists, water managers.
- You need solid reliable logistical support.

There are lots of people who have lots of opinions and have made up their minds about the Delta. Here are some of mine:

- Reliable water supplies are worth more than unreliable water supplies.
- The water projects are not mining water from Delta – they are using it as a transportation facility. If we had another transportation facility we would use it. The projects are releasing water (upstream) and a lot of times there wouldn't be water in the Delta if we weren't using it.
- There is not enough money to repair anywhere near 1,000 miles of levees.
- It is unlikely that major cuts in reliable water deliveries will be acceptable to the 25 million people receiving water from the projects. I don't think you can manage social change by managing infrastructure. Not building power plants won't decrease demand. Not building roads won't decrease traffic problems.
- Generally the best way to change things is over time.

Dale Melville: Introduced himself as the Manager of Dudley Ridge Water District, an agricultural district in Kings County. High-value, permanent crops such as almonds, pistachios, pomegranates and grapes. 100 percent of the crops are on drip irrigation. The district is 100 percent reliant on the State Water Project. There are no streams, reservoirs or groundwater in the district. Said they have worked with other water agencies and programs, such as the Kern Water Bank, to help get through the dry years. He said they are very worried about the Delta because they are vulnerable to changes that happen in the Delta. He stressed that he was speaking for himself and not for his Board of Directors.

Looking toward 2008, he said it is a nervous time for the district's growers. It is a major investment in these farming operations – hundreds of thousands of dollars. It takes seven years for pistachio trees to get into full production. Have heard possibilities of receiving 70 to 75 percent of our water supply in average years – 50 percent in dry years. This means there are trees and vines that won't be irrigated. Permanent crops are a major investment that needs constant water to sustain them – decreased water supply will have a major economic impact on district growers. The district will be devastated if there is not a Delta solution. In 1991, a dry year, a decreased water supply led to 25 percent of permanent crops being taken out of production. This is potentially much worse.

Two problems:
The short-term problem – May 31 when the pumps were shut off. We're trying to get some good science going on. The bottom line: if you look at where the pumps are and

where the smelt are 90 percent of the larvae and smelt are not down where the pumps are so the problem will not be solved by simply shutting them off. Need to look at the impact of these other stressors such as other unscreened diversions, power plant discharges, urban/ag runoff, toxic discharges, invasive species, etc. ESA/mitigation is focused on pumps and ignoring other stressors. The Delta ecosystem is going to change. We're not going to be able to restore it back to some ideal era. We are grabbing the easiest solution by turning off the pumps.

The long-term problem – climate change. More storage and conveyance are necessary to adapt and handle runoff, changing snowpack and rising sea level. Better plumbing in the Delta is necessary to provide better water quality and fisheries, etc. There is way too much at stake not to find a solution.

Philp: What percentage of the district is in permanent crops?

Melville: Roughly half of the land area.

Richard Roos-Collins: Said he is the Director of Legal Services for the Natural Heritage Institute. Explained what he does: worst part – suing water districts and power agencies; best part – negotiating settlements that work for the benefit of all the users.

A myopic focus on project operations will not lead to meaningful or sustainable solutions for the Delta and the consequences of such an approach are enormous. It's important to note that for six weeks a year, most of the nation's lettuce comes from Westlands Water District.

– Ara Azhderian, San Luis and Delta-Mendota Water Authority

Our topic is if the Delta's broken, what does it tell us about the future? We need a fix; we need a big fix. But if that's the way we think about the problem and the solution we're going to fail. We need an effective fix. We need a fix that works for water supply and the other uses of the Delta and works for a long time. At this point I could talk about plumbing but plumbing has been argued about for 84 years. He related the story of a biologist friend in North Carolina who worked as a ranger and was able to teach raucous juvenile delinquents about seaside species because he framed it as being about sex – he caught and held their attention by being provocative. We need to do the same with Delta discussion.

Said he wanted to focus his remarks on the governance of the Delta; it is broken and needs to be fixed.

1) Tragedy of the Commons – like the pasture where all shepherds could let their animals graze with no regulation or oversight, leading to a barren pasture. Users in the Delta are a modern-day example of the tragedy of the commons. Although the two major projects are regulated, there are 1,800 unregulated diversions from the Delta. There is an 1859 law on the books in California prohibiting such diversions – it is ignored. The Fish & Game code has not been adequately enforced. We need to have a system where each user is responsible to prevent or mitigate their impact.

2) Regulation is a Rube Goldberg
Regulation of the Delta is a patchwork. I can list a dozen or so agencies that have regulatory authority in the Delta. Those agencies do not communicate or coordinate efforts with each other. We need to have more simple regulation – not necessarily one agency. Cal EPA might be a useful model.

3) Distrust
The nation was constituted on a principle of trust. In the Delta, the west Delta distrusts the east; the north distrusts the south – and that's before you begin talking about exports. Or the environmental community vs. water users. Distrust is how we manage the politics. Well that won't work. We need the politics of trust in the governance of the Delta of the future. Zone 7 Dale (Myers) is correct to distrust consensus. I say that even as I try to implement consensus into every settlement. Gave an example of governance based on trust that he thinks is working. PG & E's bankruptcy during the energy crisis required that it entrust 140,000 acres of watershed lands from Redding to Bakersfield to a stewardship council to determine how to manage the land for all beneficiaries. This council has 17 diverse directors. It makes decisions by consensus. It's a joint venture so that each member has an incentive for success and a disincentive for failure. We need to set it up so that all of the Delta stakeholders have an incentive for success – that will create trust over time.

4) Inflexibility of governance of the Delta
This is shown by the fact that the state and federal projects are operating in violation of the Endangered Species Act according to the courts. They weren't able to adapt to the changing circumstances of the Delta smelt. The future governance of the Delta has to be adaptable. Climate change will have impacts on the Delta that we can't imagine. If we set up a system of governance today that marginalizes climate change we will be back here in 10 years with no workable solution. We need to build meaningful adaptability into governance.

He concluded with a saying by Thomas Edison who was asked about his 300 failures to create a filament before he figured it out. Thomas Edison said I didn't fail 300 times.

I found out how not to do it 300 times and then I did it right.

Philp: Asked panelists to respond in two words or less to the following questions: The fundamental ill of the Delta is 1) a management problem, or 2) a plumbing problem?

Azhderian: Management

Myers: Management

Melville: Both

Roos-Collins: Both

Philp: Fluctuating Delta. The Public Policy Institute of California report that came out earlier this year declared that the primary ill of the Delta is that it doesn't fluctuate enough; we have created a 24/7 freshwater estuary in which portions of it were naturally more saline at times. Are you a believer or a disbeliever in the fluctuating Delta?

Azhderian: Believer

Myers: Believer

Melville: Believer

Roos-Collins: Agnostic

Philp: Listed the top ills of Delta and asked panelist to choose the single greatest ill in their opinion. The lack of:
1) levee repairs
2) surface storage
3) adequate conveyance
4) invasive species eradication
5) habitat enhancement
6) proper management and enforcement by government
7) pesticide eradication
8) development regulation

Roos-Collins: Lack of good management

Melville: Lack of conveyance

Myers: Lack of conveyance

Azhderian: Lack of good management

Philp: Asked panelists if a lasting solution in Delta includes some sort of canal or pipeline around the Delta.

Azhderian: Yes

Myers: Yes

Melville: Yes

Roos-Collins: I'm not ready to answer that question. It's a fair question. I have a personal opinion. But I think in panels like this and in legislative debates we tend to answer that question first and I don't like to. I'd rather talk about the functions that are served and get to the actual facility later.

Philp: How are we going to get to the bottom of this one way or the other? Do you have faith in the processes we set up? The Delta Vision, the Bay-Delta Conservation Plan, the Legislature … Do we think that we have a process set up to come to some sort of lasting decision?

Roos-Collins: Referring to the BDCP, he noted that it operates by consensus which gives him some hope, but it has a relief valve so if we get stuck those that are regulated and those that are regulating can go forward. The clock is ticking that motivates us to make decisions. He praised the leadership of Karen Scarborough, Assistant Resources Secretary. All the members of the steering committee understand the importance of what we are doing and are personally committed to its success. Schedule calls for preliminary solution by December 2007 with all regulatory processes to follow in 2008 and 2009. I'm more confident about this process than I was about CALFED or any other process that preceded it and it's just one of the processes that I think has considerable promise.

> ***I don't think you can manage social change by managing infrastructure. Not building power plants won't decrease demand. Not building roads won't decrease traffic problems.***
>
> **– Dale Myers, Zone 7 Water Agency**

Melville: I am hopeful that it will be successful but am aware of the way history has repeated itself in the Delta and how the politics and the litigation tend to keep going on and on and on. The ideal CALFED words were that we would all get better together but it sure hasn't happened with over a billion dollars spent. I hope the time is right. We're much closer to a real crisis and unfortunately that's when we react a little bit better.

Myers: I'm an optimist by nature, but that was before I got into the water business. It is not a process that will get us somewhere, it's attitude. It's people deciding that it's got to be fixed and we're in it together and we got to give up something – everyone does.

Azhderian: Said he agrees with Richard that the BDCP process has promise and potential. Concerned about what might occur in the next one to two years and said support of a long term vision is somewhat in doubt. I don't think

there's one process that's going to carry the day. We need to rely on a multitude of processes to come up with solution because DRMS, BDCP, Delta Vision all have their own focus. It would be a disaster if legislators (state or federal) jump in and mandate an answer. Flexibility in the solution is essential because our world has significant unknowns and uncertainties.

Roos-Collins: What Ara said about the legislative debate is fundamentally important. If it's done the way we've done it before, by mid-September, the warring constituencies will have lobbied and won or lost in specifying a specific conveyance or storage facility subject to funding. I believe that many in the water community and the conservation community are looking forward to that familiar effort. I think it would be a mistake on all of our part to do what we've done before and failed at; to specify a single facility and say "we've done it, let's move on." My hope is that any bond funding calls for the funding to be spent on performance of a plan that meets certain functions and criteria. And that plan is developed rationally, quickly and when it's adopted by DWR or the Bureau or whoever, that it specifies the facilities that will be built. I'm making a personal plea that we not return to the old way of debating facilities as the governor's proposal goes to the Legislature; instead, that we find a new way.

The ideal CALFED words were that we would all get better together but it sure hasn't happened with over a billion dollars spent. I hope the time is right. We're much closer to a real crisis and unfortunately that's when we react a little bit better.

– Dale Melville, Dudley Ridge Water District

Myers: I agree with Richard. Very well put. As a water agency representative, if I had to choose today, I'd have to choose an isolated facility because of what's on the table, I think that's best. I also agree with you and Ara that the BDCP may produce a plan that works for all of us.

Philp: Asked the panelists if they have a solution.

Azhderian: I think the solution is to try to resist the inclination to jump to the familiar and to be able to think more broadly and collaborate and create. I think the other alternative is just going to have us fighting.

Myers: Bearing in mind that when I started I made some remarks regarding what the solution has to have, in that regard we're looking for infrastructure that will support the broadest ecosystem restoration, the most reliable water delivery and the most latitude of resolving local in-Delta problems. Rome is burning; let's get on it, folks.

Melville: Recited data related to potential seismic activity; we don't have a lot of time. We don't have to start construction today, but next year would be OK. The processes are moving quickly. But my take of what needs to come out is that we are going to need some more through-Delta conveyance, groundwater and surface water storage, we need to keep those water suppliers in the state economy healthy. That doesn't mean the environment goes by the wayside. Lots of water quality and habitat things we need to do concurrently. Invasive species are going to be difficult to address.

Roos-Collins: Told story of traveling to Twitchell Island for the Governor's press conference and how he got lost. When he asked for directions from local residents, they told him to tell the governor to deal with invasive species. They took me out and showed me some they say are resistant to all the pesticides and are harming the beneficial uses. I agree the plan has to deal with all the limiting factors, not just water supply. The second thing they said is that it's not just the big guys who are paid to be advocates; it's the little guys, too. They need to be part of the solution. Which is right. Solution – agreed that attitude is important. Told story about the PG&E bankruptcy and 2003 pre-hearing conference. Judge looked at all of us and said he wanted the environmental issues resolved in nine days – that he didn't want a trial. Promised us a miserable trial if we didn't do it. Nine days later, we had a settlement, which he signed. Attitudes changed when we realized we had a joint venture to win not to fail.

Question from the Audience: What is the proposed governance structure to spend the bond money and get us to a solution?

Philp: I've been in on discussions on this and governance is very much a work in progress. I think the BDCP is so focused on figuring out a conservation plan, governance is the next frontier. It's the last question today, but will be the first question later in the process. •

Input on a Delta Vision

Greg Bourne, Managing Senior Mediator, Center for Collaborative Policy, introduced himself and explained that he is working with the Water Education Foundation so that participants' voices can be heard by the Blue Ribbon Task Force. He provided an update on the work of the 43-member Delta Vision stakeholder group, and said he is quite optimistic that we might be able to make some progress.

He showed a portion of a PowerPoint presentation developed by the UC Berkeley's Delta Initiative of five "straw" proposals of the future Delta: enhanced existing Delta; eco-crescent; flexible Delta; Peripheral Canal; and dual conveyance. The stakeholders then voted on their preferred visions and none selected either the enhanced existing Delta or the Peripheral Canal. He said the stakeholders agreed on several common solutions for the future Delta including:

- Water supply security through Middle River
- Ecosystem enhancement through actions at Delta periphery
- No abandonment of Delta landform and infrastructure
- Maintaining agriculture and recreation in Delta
- Preparing for an emergency

He said the stakeholders also agreed to a list of no-regret or low-regret strategies for immediate implementation that could work into development of the longer term Delta vision, including development of an armored conveyance corridor through the Delta. One of the guiding principles for the group has been the idea of staged activities that you can test and reversibility so if you test it and it is not meeting the objectives, you can adapt the solution.

He explained the process for the lunchtime breakout groups. Participants were previously assigned to different tables, with each table composed of people from various interests. Each table was to select a recorder to record the conversation and a reporter to report-out after lunch. He encouraged robust conversation among participants as they considered three questions developed by the Center for Collaborative Policy related to the Delta Vision.

Each table was asked to address these three topics/questions:

1. Based on what you know and what you've heard today about risks to the Delta, and the importance of the Delta to the Central Valley, what are your ideas about how to reduce risks to the Delta?

Greg Bourne

2. Identify and discuss strategies that might be appropriate for the Central Valley to reduce water demand while maintaining a strong economic base, thereby leaving more water to address Delta ecosystem concerns?

3. What would you want the Delta Vision Blue Ribbon Task Force to know about your sense of a vision for the future of the Delta?

The Foundation will provide the written reports to the Center and state officials for inclusion in the development of the Delta Vision. The oral report-outs as well as the written reports are included in the written summary proceedings. •

Input on a Delta Vision: Breakout Group Reports

Following the lunchtime breakout group sessions, the workshop reconvened. Greg Bourne explained the process of reporting on each group's discussions. For each question, representatives from the various groups were asked to outline two to three key points, with subsequent speakers/representatives adding on new and/or different thoughts and perspectives. (Note: see Appendix A, page 24, for the written reports from the various groups.)

Based on what you know and what you've heard today about risks to the Delta and the importance of the Delta to the Central Valley, what are your ideas about how to reduce risks to the Delta?

Answers

- Cooperate rather than have solutions imposed by courts or Legislature
- Integrate all interests: environment, farmers, the public, etc.
- Short-term solution: Provide a conjunctive use program to reduce risk of water supply cut-offs from Delta levee failures
- Long-term solution: Construction of Peripheral Canal
- Levees – shore up
- Address inconsistent land use with flood control – does it make sense to continue farming? How can we control further urbanization in the Delta?
- Any solution to control risks needs to be flexible
- Decreasing exports
- Preventing the introduction of additional invasive species
- Identifying the most vulnerable islands and determining whether we can protect them, or if we should sacrifice them
- Reestablishing natural ecological processes
- Imposing stricter discharge standards on sewer agencies
- Reduction of reliance on Delta for water
- Increased storage
- Need resilience in system in event of crisis
- More surface storage north of the Delta: On-stream Auburn Dam/Off stream: Sites Reservoir
- In-Delta islands – take some out of production and flood them to create fresh water habitat and reduce pressure on levees
- Isolated conveyance facility
- Stop farming in subsided areas
- Explore opportunities to restore natural floodplains upstream of the Delta

- State landscape ordinance to reduce amount of water used on urban landscaping
- Develop Delta conservancy that can make regional decisions
- Charge water rates commensurate with water delivery costs
- Peripheral conveyance facility needs to be tied with a water storage facility

Identify and discuss strategies that might be appropriate for the Central Valley to reduce water demand while maintaining a strong economic base, thereby leaving more water to address Delta ecosystem concerns?

Answers

- Cash for grass – pay people to plant alternative landscaping
- Tax incentives for commercial use of low-flow plumbing fixtures
- Mandating use of gray water outside
- Use a mechanism to transition urban residents into using drip irrigation
- Education through UC ag extension for farmers, but also for urban and industrial users
- Our table felt the question reflected a bias. The environment already is the single largest user of water in the state – how is the environment using water? Should the X2 standard be maintained in the Delta? The Wild and Scenic Rivers system wastes a lot of water – a lot of water flows out of the state and is not serving any beneficial use. New reservoirs are important because very dry years and wet years are harmful to the smelt.
- Educate the public on environmental values vs. personal costs
- Government should set examples and publicize their native plant gardens
- Increase investment in R&D programs
- Invest in new technologies
- Our table is concerned because the SWP contract districts pay a set rate regardless of conservation.
- Streamline regulations for the use of recycled water – current regulations are prohibitive
- Establish a rotational fallowing plan funded by the public to take seasonal crops out of production during droughts
- New developments need to pay for the full costs of their water and make sure their supply is real water, not just "paper" water
- Increasing and promoting infill and smart growth, protecting prime ag land and reducing residential water use
- Increasing funding for integrated regional water management planning
- Groundwater banking and recharge
- Establish incentives – successful demand reduction helps to stretch water supplies
- Increase water reclamation and reuse
- Education and communication – let people know what others are doing throughout the state and develop a sense of community
- Install water meters throughout the state

What would you want the Delta Vision Blue Ribbon Task Force to know about your sense of a vision for the future of the Delta?

Answers

- Cooperation, cooperation, cooperation
- Identify critical needs
- How do we bring the environmental community along to find a necessary solution?
- Need a solid plan and how to finance it. Need to work out "beneficiary pays" in an agreeable and fair way
- Time to move forward – put politics aside
- Peripheral canal and above-ground storage will solve a lot of problems
- Fish protection needs to be a component
- Moratorium on residential development in the Delta until levee issues are resolved
- California is different than it was in 1982 – build the Peripheral Canal; build surface storage north of the Delta
- Don't just study it to death – do something
- Restrict building in the floodplain
- Stakeholders need to take lead because the government won't – push the Habitat Conservation Plan forward
- Rather than making a reversible action, make it flexible so we can adapt to changing conditions
- Recurrent theme: don't waste time; begin implementation now so we can be proactive, not reactive.
- Think in the long term. Realize the Delta is one of California's most important components of our natural heritage and it needs to be returned to a natural state
- Attitude is everything
- Need action, but we need to develop a sense of trust with Northern, Central and Southern California
- We need a tremendous amount of education – we recommend that Water Education Foundation be fully funded to carry out education/workshops. It is too important of an activity to be left to amateurs.
- Referring to work on the Merced River; billions of dollars were spent for salmon restoration, but there has been little evaluation. Be sure to earmark some funding for evaluation of the solution and to not move too quickly. Merced River focused on short-term grant funded projects instead of long-term comprehensive plans.
- Need to get across the sense of urgency. The May 31 pump curtailment – if the shutdown had been any longer it would have been devastating.
- Turn the approach around and make a final commitment to building and set a schedule of five to 10 years and then work to minimize damage to the Delta.

The Value of the Delta to the Valley: How to Shape a Delta Vision

Panelists L to R: Debbie Davis, Environmental Justice Coalition for Water; Phil Larson, Fresno County Supervisor; Moderator Matt Kondolf, UC Berkeley; Jim Beck, Kern County Water Agency; and Tom Zuckerman, Central Delta Water Agency

Moderator Matt Kondolf: Explained that part of the job of the panel was to give the audience a sense of the importance of the Delta to the San Joaquin Valley. He asked the panelists to discuss the relationship of land and water in the Delta; what they see as a critical issue facing the Delta, and describe what the Delta means to them.

Tom Zuckerman: Said he was going to respond to the breakout group reports – and that he was going to respond to them from an in-Delta perspective. The San Joaquin Valley, Tulare Lake Basin and the Delta are all victims of the same problem – when these water projects were planned they were planned to meet the water demands not only of Southern California and the valley, but the areas of need upstream of and in the Delta. In 1959, the idea was to build reservoirs and dams on North Coast Rivers to supply water to the projects. Oroville Dam was built, which only has a yield of 1 million acre-feet, but no others were built – leading to an incomplete realization of water plan. The Wild and Scenic Rivers legislation put these rivers off limits. The State Water Plan never developed a yield from storage projects to meet contractual obligations. The solution was to squeeze water out of the Delta from unregulated flow. This works well in wet years, but not in dry years. The needs of the Delta, the fishery and water quality are shortchanged and there is a major environmental and economic disaster looming. There has been an inability to meet the commitments to the water contractors. The urban areas get priority because they agreed to pay more, so the San Joaquin Valley and the Delta have felt the brunt of the problem.

The in-Delta group is not just farmers or local elected officials, but also environmentalists, recreational people, hunters, fishermen and people concerned about infrastructure. They have presented their idea/recommendation for the Delta to the Delta Vision Blue Ribbon Task Force. Said the group is going to discuss idea that if you squeeze as much water out of the Delta in dry years and continue to develop valley floodplains and dump all the flood water in the rivers in the wet years you'll end up with an unsustainable Delta. We think we need to examine historical

floodplains, including the Tulare Lake Basin, and figure out which to reclaim for their original use as flood basins in wet years, catch that water for agriculture and depleted groundwater basins in the San Joaquin Valley. The Kern County Water Bank is an example.

Phil Larson: Said as a lifelong farmer he understands the complexity of the issues facing the Delta. The Delta is a vital water conveyance system for farming. Said the July 2 closure of the Jones pumping plant had real and considerable effects on farmers in the valley. Some farmers plowed under crops because of the lack of water. Some farming operations bought and borrowed water at cost of $350 to $710 per acre foot. Provisional wells were activated, drawing down groundwater aquifers. Concern is without assurances that this won't happen again next year; that even more land will be fallowed and some farmers may give up permanent crops. Drastic times call for drastic measures for shortages not due to drought.

> ***The needs of the Delta, the fishery and water quality are short-changed and there is a major environmental and economic disaster looming.***
>
> **– Tom Zuckerman, Central Delta Water Agency**

Consequences affect more than just farmers, but also migrant farm workers and small businesses. Healthy ecosystems are important, but must be balanced with economic interests. Compared potential impacts to those from major freeze in 2006. Quality of life has been impacted. It is ironic that advocates of environmental justice support reduced diversions from the Delta to protect fish without regard for the impact of inadequate water supplies on low-income minority populations in Fresno County.

Debbie Davis: Explained that she represents a statewide coalition to build capacity of low-income minority communities and connect them to statewide policy decisions. Serves on Delta coordination group. Not ignoring the plight of the farm worker. Our organization has not taken a position on diversions from the Delta. Define the problem more broadly and consider impacts on their members from Sacramento Valley, such as the American Indian tribes, and discussion about building more surface storage. Also consider the needs of the communities in the Central Valley – farm workers and residents of towns that don't have safe drinking water and watch better quality water flowing by in the canals. Also are considering the needs of communities who rely on subsistence fishing. So have a whole range of issues to concern. Water quality usually means salinity, for our group it also includes mercury, which ends up in fish, creating public health risks. Also concerned about displacement of farm workers due to floods.

How to shape a Delta Vision. Those are all the interests I bring to the table, but the first step is that we need to leave interests at door. If the Delta crashes, the whole state crashes. We need to look beyond individual interests and focus on what is the best interest of the whole state. My principles:

- The Delta has to be maintained as resource for state – it has to provide a hub for the water supply in the state in some shape or form.
- The Delta is a dynamic system. Sometimes people say map "No. 2 is the ultimate solution and we can all go home." Realistically, there will have to be course decisions on the way and we may have to make changes day to day.
- The most important piece we get out of the Delta Vision is not necessarily which map we choose but the governance structure that's going to manage the vision and the process to get to that vision. Management is a big problem; our best thinking today may not reflect the decisions that need to be made in the future.
- The link in the public's eye. All of you are the people who really care and know more about the Delta than everyone else in the state. But if you are the only ones who participate and help come up with a solution, if that's all there is, we're going to fail. We need to educate all the people on where their water comes from, how the system works and what their personal investment is. A sustainable Delta has to be linked with a sustainable California.

Jim Beck: Said he became general manager of Kern County Water Agency in 2005. Set a record for water recharge that year – result of generations of investment by locals to capture large amounts of water. Have spent half a billion dollars to stabilize water supplies since SWP not completed as it was envisioned. To deal with high variability of water supplies have invested own money into local facilities. 2006 – second-highest year of recharge. Banks Pumping Plant delivered high flows water that allowed them to store lots of water. 2007 – SWP allocation dropped to 60 percent. On top of that, the pump shutdown: each day that Harvey O. Banks was shut down cost growers $1 million to come up with alternative water supplies. Frightening thing about pump shutdown: 30 more days would have cost Kern County growers $1 billion. Foreboding of what might happen if there was a major earthquake that took out the pumps.

In a normal year Delta water accounts for one-third of our surface water supply; 60 percent in a drought year. Have local issues that have impacted supplies linked to seismic issues with Lake Isabella and endangered species. In a crisis mode ending this year and going into 2008 SWP initial allocations could be as little as 25 percent; DWR

remedies could start allocations at 10 percent and also face more smelt actions.

We are aggressive proponents of the Peripheral Canal – or as our board calls it a Delta Security Project because it would secure the Delta for a variety of uses including environmental uses. As a biologist and a water quality specialist, I have the scientific background and recognize the benefits of a Peripheral Canal to the environment and the water users. Are at a point where a decision has to be made; can no longer defer this decision. Currently there is a tremendous amount of media and political attention on Delta issues – the stars are aligning.

Question from the Audience: Debbie mentioned mercury. Where does this mercury come from and who is to blame? And how do we deal with it?

Davis: Mercury in the Delta comes from various sources. Mercury can come from runoff from abandoned mines and some of it occurs naturally. The biggest concern is that the mercury that has washed into the Delta is now in the sediment so any wetlands restoration and drudging projects disturb the mercury and release it back into the water where it gets into the food chain. How you clean it up: the Central and San Francisco Regional Boards have gone through the TMDL process and developed some ideas; but, the San Francisco plan is a 100-year plan. The concern we have is that the mercury can impact disadvantaged minority communities that rely on subsistence fishing in the Delta (mercury in fish) as a food source; our goal is to teach them how to reduce their exposure to mercury.

Question from the Audience: What about the claims that agriculture in the Delta is unsustainable. How do you respond to that?

Zuckerman: The subsidence of the Delta islands is primarily the erosion of peat soil and oxidation. When the Delta was first reclaimed almost the entire farm surface was organic soil and most of that has eroded. There's about 100,000 acres of land that have enough organic material to continue to subside. There's 500,000 acres of farmland that isn't going to change noticeably from subsidence. It is largely in the central and western Delta and those are the areas that are most subject to earthquake problems. And the foundations of the levees themselves are sand or peat. It's likely that those few islands will need to be treated differently. We envision that farming will probably not continue on portions of those islands and there will be conversion to more public uses – recreation, education and wildlife refuges to stop subsidence that might still occur.

I know this is not a particularly friendly audience to the Delta, but I want to make one point about the Peripheral Canal. I would challenge anyone to tell me how the canal develops any water; all it does is shift a shortage from one areas of the state to another. Examine your consciences and ask is it OK to help farming in your area by ruining it to the north.

Question from the Audience: The SWP pumps were shut down due to concerns about the Delta smelt. There are lots of non-native species in the Delta; should we be considering the non-native species when we talk about the Delta smelt?

Zuckerman: There have been efforts to do away with the Endangered Species Act. It's not going to happen. In the absence of getting rid of the act we're faced with the problem of trying to deal with threats to native species. The exotic species are certainly creating a problem. But the fact that we've changed the hydroscape of the Delta is the bigger problem – with the pumps drawing salt water into Suisun Bay. They have altered the physical components of the bay. Our proposal to the Delta Vision calls for reestablishing Suisun Bay and the mixing zone of salt and fresh water as it was before the projects moved the salt water farther to the east. We call for doing that by storing flood water and replacing the water from the Delta during the driest years – expanding the water supply. We think it is the only way to solve the problem short of abandoning Delta exports during the drier years.

> ***We need to educate all the people on where their water comes from, how the system works and what their personal investment is. A sustainable Delta has to be linked with a sustainable California.***
>
> **– Debbie Davis, Environmental Justice Coalition**

Beck: Should we be going after invasive species? Absolutely. It is unfair from an export pumper perspective that only the pumps were turned off and no other stressors were considered.

Question from the Audience: I keep hearing that we need to start some construction on some sort of facilities. Most of the proposals for financing these will require local cost share and there is interest in beneficiary pays. Having worked in the San Joaquin Valley I realize that most of the farming operations financially are on the edge – maybe you can give us an idea of how much more they can afford to pay. What would this do to farm worker communities?

Beck: The SWP contractors did a cost analysis of what it would cost to build the Peripheral Canal following the original alignment. The rough estimate is $4 billion. Generally, if wholly financed by the water users, it would cost $50 an acre foot. An additional $50 would be a hit to our growers. None of our growers say it would be easy to

pay. But, I also have growers saying what are our alternatives? If we don't do this is there any alternative water supply? From a SWP area I think you do have some willingness to help finance this with some caveats – that we get to control the construction costs. Thinks public funded project would be subject to cost overruns. Friant water users have different perspective of their ability to fund Temperance Flat. Know there are discussions of some public funds for that project.

Larson: I commend Kern County for its work with water banking. In Fresno County we are just starting a groundwater bank. This year water costs went as high cost $710 per acre foot to sustain permanent crops. That can't be sustained with that kind of a cost. On the western side of Fresno County water costs are $70 per acre foot if you farm 960 acres or less. This year, they received a 50 percent allocation. We can't sustain those costs. If this keeps up there will be no farming in Fresno County or any other county in California.

> ***We are aggressive proponents of the Peripheral Canal – or as our board calls it a Delta Security Project because it would secure the Delta for a variety of uses including environmental uses.***
>
> **– Jim Beck, Kern County Water Agency**

Davis: Addressing the low-income community issue. What price would you be willing to pay for safe drinking water? I think most people would be willing to pay a lot. For the communities in the valley that don't have access to safe drinking water right now it's a hard choice. If you said to them we are going to build Temperance Flat and say you will get some of that water for drinking water they would maximize their willingness to pay. Practically speaking, I don't think politically that will ever happen. I don't think the beneficiary pays model applies to them because I think the likelihood that they will benefit is fairly nonexistent.

Zuckerman: I would like to add an item. If we can get serious about flood control, flood control is typically a non-reimbursable function of water projects, most of flood control costs are not borne by the farmers.

Question from the Audience: Why should we continue to farm high-selenium land on the west side of the San Joaquin Valley when high quality land in the Delta and elsewhere might go out of production? How can growing cotton be justified when it takes about $750 an acre foot to grow a product that yields about $150 an acre? Subsidies allow for the continuing farming of corn, cotton, etc.

Larson: The water that was paid for $750 didn't go to cotton. Five years ago we grew 1.5 million acres of cotton in the valley; this year we're growing 500,000 acres and two-thirds is not federally subsidized. It is a false statement to say that we are farming bad land in Fresno. If we stopped farming in Fresno the farm workers would have to be absorbed into the cities and go on welfare.

Beck: In 1991, when we suffered a significant drought on the SWP, we idled a lot of our annual crops including cotton. Cost us 30 to 40,000 jobs in Kern County. Kern County is down to about 200,000 acres of cotton and it is declining further. Big shift in our county to almonds, pistachios; in order to stay viable our growers make market decisions. You're hardening up a water demand because you're shifting away from an annual crop to a crop that is a higher cash value but demands a more reliable water supply.

Zuckerman: Much of the land that has the worst drainage problem is in the trough of the valley. Much of that area was floodplain. Much of that area is in our plan where we call for taking it out of production in wet years and using it for flood attenuation and carry over storage and to get water back into the groundwater. There are water quality issues related to that but if you increase flows in the rivers, the carrying capacity of the rivers to get rid of some of that drainage improves. Also that deals with some of the oversupply of some of these subsidized crops.

Comment from the Audience: This is related to comments Tom made earlier about farmers not paying their share in flood control projects. I sit on a flood control district board where the farmers pay all the operation and maintenance. … The other issue is this independent conveyance system ... if there was a system it would help open a market for willing seller/willing buyer transfers without going through the regulatory channels.

Zuckerman: My point was that no one expects farmers to pay for flood control aspects of dams. They are considered public investments to protect the population. I was just suggesting that the more a project is designed for flood control the cheaper it becomes for a water supply. We're talking about a program that compensates farmers for this flood control land.

Kondolf: This discussion mirrors the discussion about the Delta that has going on for the last three decades. What has not been talked about much is land use and how land use is changing in the Delta. Said the Delta counties are the fastest-growing counties in California. It is a matter of concern. Much of this development is on what we call deep floodplains. Areas below sea level or more than 10 feet below the 100-year flood level. When those levees fail you have a Katrina situation on your hands. That's why we're concerned about land use changes in the Delta. Areas that we would have had for flood bypasses have houses on them and cannot be used. After Katrina we launched the Delta initiative. We had some workshops and

conferences and organized these charrettes – a brainstorming tool for finding solutions for land use; done in cooperation with Delta Vision process.

Charrette maps can be a good tool because you have to put lines on a map. So you can see that some of the ideas you have may not work or they conflict with something else or you can see how things might work together. It can help you move forward instead of just talking. Have been done as part of the Delta Vision process. He discussed the maps on display and how the groups developed some common themes such as bundling infrastructure facilities into one corridor, which can help provide funding to support protecting this infrastructure.

Five years ago we grew 1.5 million acres of cotton in the valley; this year we're growing 500,000 acres and two-thirds is not federally subsidized. It is a false statement to say that we are farming bad land in Fresno.

– Phil Larson, Fresno County

Zuckerman: The Delta islands are not all alike. Some protect population, some infrastructure, some farmland. Need to alleviate some pressure on the more important islands by having some designed floods by taking the pressure off. If you design it so it doesn't create a catastrophe you can protect the areas that have natural gas lines or highways.

Kondolf: Encouraged people to read the "Re-envisioning the Delta" report about the charrettes. Report located at http://landscape.ced.berkeley.edu/~delta Also plans to post Tom's plan on the web site.

Question from the Audience: In the San Joaquin Valley, market forces are creating more homes on the floodplains. I'd like the panelists to discuss how three other areas of California that used to be agricultural based – Owens Valley, Orange County and San Gabriel Valley – things do change; why is there desire to keep agriculture in this area?

Beck: Why do we want to keep agriculture? Because it's one of the few Mediterranean climates in the world. We produce 350 different crops. Sixty percent of the nation's nuts and vegetables come from the Central Valley – safer produce than from foreign countries. It is a resource we need to protect.

Zuckerman: One of the real problems we have is we don't have a flood management plan for the valley. Legislation is pending that would require DWR to create a flood management plan for the Central Valley and consider the effects of global warming. If we're going to continue to chew up land with houses hopefully it won't be land that is going to flood and we'll have a clearer idea of where we should grow and that land should remain open floodplain.

Question/Comment from the Audience: I wanted to let everyone know that there is a lot of information available on the Internet including web-cast Delta Vision workshops. It is designed to be a public process and we encourage your participation. On the floodway issue, I know the stakeholder group has come up with a general agreement that floodplain bypasses would be good on the San Joaquin River system and maybe some additional flood storage in the Tulare Lake Basin. Are there other things we can do to relieve flood pressure on the San Joaquin side?

Larson: In Fresno County we have the Kings River to the south and the San Joaquin River to the north and we have suffered some serious flooding on the Kings River. Our channels could handle high flows but the problem is the state and federal officials will not let us clean the channels because of endangered species, etc. We've been fighting for 20 years to clean the channel and it would alleviate the flow into the San Joaquin River if we could clean the channel.

Zuckerman: We tend to think of flood as the common enemy. I think we need to think about flood water as our common friend and figure out some way to capture these flows. We aren't going to be able to do it in the Sierra Nevada so the logical way to do it is to capture it on the valley floor like we did historically and not just think the problem is over if you put it into a leveed waterway – you're wasting a resource and you're creating a problem downstream.

Beck: We need to make sure people understand that the state is more and more interrelated. When Phil's area is in flood flows like it was the last couple of years, we in Kern County could have helped by having more water run down the Friant-Kern Canal into our recharge areas. But there are institutional hurdles and those hurdles made it cheaper for us to take water from the SWP than to accept their flood water. We couldn't get around those hurdles in time to help them. •

Appendix A

Written Responses to Breakout Group Questions

Discussion Topics:

1. Based on what you know and what you've heard today about risks to the Delta, and the importance of the Delta to the Central Valley, what are your ideas about how to reduce risks to the Delta?
2. Identify and discuss strategies that might be appropriate for the Central Valley to reduce water demand while maintaining a strong economic base, thereby leaving more water to address Delta ecosystem concerns?
3. What would you want the Delta Vision Blue Ribbon Task Force to know about your sense of a vision for the future of the Delta?

TABLE 1

Discussion Topic #1:

- Cooperate and work to integrate all interests rather than have solutions imposed, either by courts, feds, or voters.

Discussion Topic #2:

- Ability to be flexible is important.
- Groundwater banking and recharge – better utilization of water, less demand on Delta, long-term storage reduced by pumping costs with higher table.
- Question – why is the focus on San Joaquin Valley and not other Delta end-users (Southern California)?

Discussion Topic #3:

- Cooperation
- Identify critical needs
- How do we bring environmental community along to a necessary solution?

Other Thoughts:
Reduce risks to Delta:

- Armored channels
- Bypass-isolated facility?
- Fluctuating Delta
- Different options being developed through channelization project, selected for best opportunity for environmental restoration.
- Fresno County reliant on Delta and is recognized.
- Cooperation vs. putting to vote statewide conveyance and surface storage.
- Climate change – need reliability regardless. Cooperate rather than have solutions imposed by courts or voters.

TABLE 5

Discussion Topic #1:

A. Risk - Levees
- Blocks of dewatered processed garbage
- Control urbanization in Delta
- Farming may be inconsistent with levees – perhaps buy out and rehabilitate peat
- Restore wetlands

B. Uncertainty
- Need to maintain flexibility
- If you build something it needs to be managed different ways

C. Political, rather than logical solution
D. Population growth
E. Not enough water for the ecosystem
F. Pollution levels
- Mitigation

Discussion Topic #2:

A. Recycled water
B. Accelerating conservation
C. Change attitude to landscaping
- Using market incentives makes it easier for people to do it and promotes awareness.

Discussion Topic #3:

- Need to acknowledge that the solution will be complex in terms of small scale land use.
- Need to try not to over-manage the system, while also setting some goals for restoration.

Other Thoughts:

For Blue Ribbon Panel: In order to ensure that any large actions/projects function as intended, please *obligate* funding for evaluation of projects, not just implementation. Work on the Merced River for the Anadromous Fish Restoration Program has not had good evaluation and I'd hate to see that on the Delta.

TABLE 6

Discussion Topic #1:

- Decrease exports
- Identify most vulnerable islands and take steps to protect
- Impose stricter discharge standards (currently secondary treatment)
- Prevent introduction of additional invasive species
- Reduce water demand
- Reestablish ecological/natural processes to a managed level

Discussion Topic #2:
- Increase public education and awareness for the need to conserve.
- Change DWR's ranking criteria for water use efficiency grant programs to water saved (gallons) vs. cost of water.
- Provide additional R&D funds to improve irrigation water inefficiencies.
- Public education on the value of using native plants and recycled water.
- Create industries in water use efficiency technologies.

Discussion Topic #3:
- Attitude is everything!
- Don't waste time! Don't overanalyze, begin implementation now.
- Be proactive rather than reactive. Implement long-term resolutions that are currently economically viable, as they may not be in the future.
- Restore the Delta to a more natural state.
- Recognize the Delta as an important part of California's natural heritage.

TABLE 7

Discussion Topic #1:

A. Attenuating risk – stop farming in subsidence areas.
   - Explore opportunities for restoring natural floodways upstream

B. State landscape ordinance governing residential uses to reduce household consumptive uses.

C. Restore to a checkerboard of uses.
   - Delta conservancy to make policy on a regional level
   - Change water rates commensurate with the cost
   - Mandate water metering statewide.
   - Governance – a model that directs bond funding to solving the problems

Other Thoughts:
After careful study:

A. Letting some islands go to reestablish natural/engineered wetlands as a substitute land use, with the goal of less pressure on other levees.

Tides, winds, waves:

B. Establish agriconservation lands for flood bypass areas.

C. Get beyond local land use decision-making to empower state land use decision-making.

D. State landscape ordinance for residential uses.

E. Mitigate problem of fragmentation of jurisdictions. Reformation of governance.

F. Establish system of locks and storm barriers that can be used during emergencies (e.g.: Panama Canal).

TABLE 9

Discussion Topic #1:

Numerous Delta problems are too costly to solve one by one. Therefore:
- A Peripheral Canal may be more cost-efficient. Need outlets that are adequate for conveyance.
- Armored waterway to strengthen water supplies (at least the larger and main ones).
- Additional off-stream storage and backups.
- Defined demands – who will Delta serve? Extensive – whole state vs. local areas.
- Need to optimize storage along with conveyance.
- Reduce continued subsidence of deep Delta islands.

Discussion Topic #2:
- Surface flow irrigation should be switched. Drought tolerant plants and landscape with smart controllers and metering for all urban uses.
- Switch from surface flow to drip and micro fans.
- Encourage community pools vs. family pools for newer developments.
- Change the financial structure to benefit people for conserving water. If environmentalists want the water, they should pay for it.
- New developments should pay for 100% of water brought in and prove they have the water available to support it.
- Make recycled water more feasible to use – simplify the restrictions.
- A rotational following plan paid by public money.

Discussion Topic #3:
- Act as though the pumps are down and make the urgency now.
- Limit population flowing in since they don't bring water with them.
- Make a commitment to build an isolated facility and provide a soft landing to minimize the damage to Delta and its habitats. Land use changes to the Delta will take years and years.

TABLE 10

Discussion Topic #1:
- Above-ground storage
- Armor certain levees in advance of seismic event to prevent salinity intrusion
- Focus scientific effort and thought into a creative solution for invasive species
- Isolated facility or armored channel through Delta

Discussion Topic #2:
- Cash for grass – paying people to use alternative landscaping
- Drip irrigation vs. traditional spray/sprinkler irrigation

- Encourage use or mandate gray water technology for exterior use
- Tax incentives for commercial use of water conserving plumbing features
- Water conservation for commercial and residential use

Discussion Topic #3:
- Consider moratorium on residential development until Delta issues resolved.
- Fish protection
- It's time to move forward and put politics aside.
- P.C. – storage

TABLE 13

Discussion Topic #1:
- Conservation to reduce reliance
- Greater use of reclaimed water
- Increased storage

Discussion Topic #2:
- Meters
- Drought tolerant landscaping
- Education, i.e.: schools, mailers, demonstration gardens, ag education
- Drip irrigation (ag and landscaping)

Discussion Topic #3:
- Ensure reliable water supply. If risk goes unabated, private sector financing and insurance will be more difficult.
- Have a plan and know how to finance it.

TABLE 14

Discussion Topic #1:
- Delta cannot be all things to all people
- Current agriculture is unsustainable. Manage conversion from ag to habitat.
- Separate water conveyance facilities from habitat but manage for multiple purposes.

Discussion Topic #2:
- Further conservation in Central Valley doesn't make sense.
- Water conveyance should focus on delivering quantities various governments have contracted to deliver. Focus should also be on efficient water use by environment.

Discussion Topic #3:
- Maintain flexibility to adapt to changing circumstances and be prepared to implement plans and move forward, adapting as necessary but focusing on results.
- We have analyzed this thing to death – no solution will be perfect because circumstances will change.

TABLE 15

Discussion Topic #1:
- More surface storage north of Delta, both on-stream (Auburn Dam) and off-stream Sites Reservoir.
- In Delta, take some islands out of production and flood them with freshwater to make reservoirs and freshwater habitat for marine life.
- Isolated conveyance facility to carry water to the pumps for South S.J. Valley and Southern California.

Discussion Topic #2:
- Can't do it – health in agriculture means planting crops that use water
- Development equals growth

Discussion Topic #3:
- California is a different state than in 1980.
- Build the Peripheral Canal isolated conveyance system.
- Build surface storage north of Delta.
- Bottom line – do something. Make something happen. Don't just study it to death and do nothing.
- Restrict building in this floodplain.

TABLE 16

Discussion Topic #1:
- Peripheral "conveyance" and water storage facilities
- Reduce pumping impacts
- Allows for greater manageability of Delta and flexibility for ecosystem
- Obtain an answer to the question: In order to maintain a healthy ecological Delta, how much water is needed?

Discussion Topic #2:
- Incentives and metering, which are currently lacking in the Fresno-metro area
- Promote water conservation education and communication, in order to find out what efforts people are making throughout the state and to develop a sense of community.

Discussion Topic #3:
- Focus on pushing and continuing educational programs in order to get people to develop a sense of trust regionally.
- Summarize where flood tide and massive earthquake can happen with disastrous consequences. Transportation and water would be taken care of first to get states economy on recovery path.
- One result would be Peripheral Canal built at breakneck speed with adverse environmental impacts.
- A comprehensive and effective plan must be in place and implemented soon to avoid this scenario.

Appendix B
Speaker Biographies

Ara Azhderian
Ara Azhderian is the Water Policy Administrator for San Luis and Delta Mendota Water Authority. In this capacity he has focused on a wide range of activities including CALFED and the Bay Delta Conservation Plan, Central Valley Project financial issues, water transfers and development of the Authority's Westside Integrated Water Resources Plan. Mr. Azhderian also participates on the Association of California Water Agencies' Federal Affairs Committee and the Central Valley Project Water Association's Financial Affairs Committee. Previously, he was the Watermaster for the San Luis Water District where he administered the District's water resources and related financial and policy matters. Before pursuing a career in water resources, Ara spent nearly 15 years working for various agricultural enterprises on the San Joaquin Valley's Westside, and was also active in the California Bean Growers Association, California Tomato Growers Association, and the Family Farm Alliance.

Jim Beck
Jim Beck is the General Manager of the Kern County Water Agency. He has been instrumental in many programs that have placed the Agency at the forefront of water management statewide. This includes coordinating local participation in the State Water Project, developing and operating groundwater banking programs, and operation of the Cross Valley Canal. Previously, he was manager of Improvement District No. 4, the Agency's urban water district that provides a supplemental water supply for the Metropolitan Bakersfield area. He currently leads Agency staff in two major capital improvement projects: the expansion of Improvement District No. 4's treated water operations and expansion of the Cross Valley Canal. He has a Masters degree from the University of Pittsburgh Graduate School of Public Health, and a Bachelor's degree in Biology and History from the University of Pittsburgh. He is a licensed water treatment operator, certified water distribution operator and water quality analyst.

R. Gregory Bourne
Greg Bourne has been designing and conducting public involvement programs for more than 25 years, and mediating the resolution of public policy issues for nearly twenty years. After ten years as an environmental consultant, he co-founded the Consortium on Negotiation and Conflict Resolution, and the Southeast Negotiation Network, while on the faculty of the Georgia Institute of Technology in 1986. In 1996 he established the Center for Civic Participation and Renewal, a non-profit organization focused on enhancing civic engagement and public decision making. He has been affiliated with the Center for Collaborative Policy since 2001, where he is a Managing Senior Mediator. He has published numerous articles on these topics, and as an occasional newspaper columnist written about issues associated with civic engagement and renewal. He is past Co-Chair of the Environmental/Public Policy Section of the Association for Conflict Resolution. He received a Masters in Environmental Engineering Science from the University of Florida and conducted post-graduate studies at the Harvard Program on Negotiation.

Congressman Jim Costa
Jim Costa was sworn in as a Member of the U.S. House of Representatives representing California's 20th Congressional District in 2005, following a career as a member of the California State Legislature. The 20th Congressional District is made up of portions of Fresno and Kern Counties, and all of Kings County. He serves on the House Agriculture Committee, where he is a member of the Subcommittees on Livestock, Dairy and Poultry; and Conservation, Credit, Energy and Research. On the House Natural Resources Committee he is Chairman of the Subcommittee on Water and Power. Congressman Costa is a member of the fiscally-conservative Blue Dog Coalition and co-founder and co-chair of the Congressional Victims' Rights Caucus and co-founder of the Congressional Water Caucus. During his first term in office, Congressman Costa put together a broad-based bipartisan coalition aimed at developing a Regional Water Plan for Central California. He also helped draft the legislation which is a result of the Friant Water Settlement. Costa has a Bachelor's degree in Political Science from California State University, Fresno.

Debbie Davis
Debbie Davis is the Legislative and Policy Analyst for the Environmental Justice Coalition for Water, a statewide coalition of more than 60 community-based and non-profit organizations working to ensure that all environmental justice community members have access to safe, affordable water for all beneficial uses, including drinking water, cultural and spiritual uses, subsistence fishing, and recreational uses. EJCW works to build capacity in local communities so that they can advocate on their own behalf. Debbie is responsible for representing community interests at the statewide level and providing communities with the information and resources they need to become regular participants in local, regional, and state policy processes.

Matt Kondolf

Mathias Kondolf is a fluvial geomorphologist whose research concerns environmental river management. He is a principal investigator in the National River Restoration Science Synthesis project and edited a reference work on methods in his field, Tools in Fluvial Geomorphology (John Wiley & Sons 2003). Dr. Kondolf received his Ph.D. in Geography and Environmental Engineering from the Johns Hopkins University, his MS in Earth Sciences from the University of California at Santa Cruz, and his AB in Geology (cum laude) from Princeton University. Dr. Kondolf has advised numerous government agencies on the management and restoration of rivers. He was an author of Strategic Plan for the CALFED Ecosystem Restoration Program, and served on the Science Board for that program from 1999-2005. He is a member of the Environmental Advisory Board to General Strock, Chief of the US Army Corps of Engineers.

Phil Larson

John P. "Phil" Larson, a lifelong farmer and Fresno County resident, has represented the Fresno County Board of Supervisors, District One, for 2 consecutive terms. Supervisor Larsen's extensive knowledge and expertise on agricultural and water issues has enabled him to represent the Board of Supervisors on several committees, including: Mid-Valley Water Authority, San Joaquin River Conservancy, Valley Water Alliance Board and San Joaquin Valley Water Coalition. He also served as: State Director of the California Farm Bureau District 7 from 2000-2001, President of the Fresno County Farm Bureau from 1996-1998, and as Charter Member to the California Agriculture Production Consultants and Western Crop Protection Chemicals Association I.M.P Committee in 1990.

Sunne Wright McPeak

Sunne Wright McPeak is the President and CEO of the California Emerging Technology Fund (CETF), a statewide non-profit organization dedicated to accelerating the deployment of broadband technology and closing the Digital Divide. For 3 years prior, McPeak served as Secretary of the California Business, Transportation and Housing Agency for Governor Arnold Schwarzenegger, where she oversaw the largest state Agency, including Caltrans, DMV, CHP, Housing, several business regulatory departments, and programs for tourism, film, trade and small business. Under McPeak's leadership, performance in all departments improved significantly – cutting average wait times at the DMV from over an hour to 21 minutes, reducing by two-thirds the time to issue real estate licenses, and generating more than $180 million in savings. She also provided key policy leadership in support of the Governor to launch major investments in infrastructure and to foster groundbreaking regional "smart growth" planning. Before being recruited to the Governor's Cabinet, McPeak served as President and CEO of the Bay Area Council, a major employer-led policy organization promoting regional economic prosperity. She served for more than fifteen years as an elected member of the Contra Costa County Board of Supervisors and was President of the California State Association of Counties in 1983. Sunne grew up on a dairy farm in the San Joaquin Valley. She earned a Bachelor's degree in an Individual Major from the University of California, Santa Barbara, and a Master's of Public Health from the University of California, Berkeley.

Dale Melville

Dale Melville is both the President of Provost & Pritchard Engineering Group (a 160-person engineering firm in Fresno, Visalia & Bakersfield) since 2001 and Manager-Engineer for Dudley Ridge Water District (a State Water Project contractor in southwest Kings County) since 1993. Dale has been a consulting engineer involved with water and wastewater during his 32-year career as a licensed civil engineer. He was a founding board member of the Kern Water Bank Authority, participated in the formation of the first State drought water purchase program (1991), and has been involved in over 100 water transfers/exchanges throughout the State. He is a graduate of UC Davis (BS Mechanical Engineering; MS Civil/Environmental Engineering).

Dale Myers

Dale Myers joined the Zone 7 Water Agency in eastern Alameda County in 1981 as an Administrative Assistant, and retired in February 2007 as Zone 7's General Manager, a position he held for ten years. Prior to becoming General Manager, Mr. Myers served as Zone 7's Finance and Administration Director, and also established and managed the agency's Emergency Response Group. Since 2005, Mr. Myers has represented Zone 7 in the Bay Delta Conservation Plan, a partnership of water agencies, Mirant Power, state and federal resource agencies, environmental NGOs and other interested parties seeking to develop a long-term plan to assure long term water supply reliability and the restoration of habitat for native fisheries in the Delta. Mr. Myers earned a Bachelor's degree in business and finance from the University of Washington, and a Master of English, with a minor in Drama from Western State College, in Gunnison, Colorado. Mr. Myers served in the US Army in Vietnam in 1969 and 1970, and also previously served as a schoolteacher, and business and finance advisor in the United States Peace Corps in the Marshall Islands, Federated States of Micronesia.

David M. Mraz

David Mraz is a Principal Civil Engineer with the Department of Water Resources. He is currently Chief of the Delta-Suisun Marsh Office within the Division of Flood Management. Mr. Mraz oversees the implementation of the Delta Levees Program, including the Delta Risk Management Strategy, the North Delta Program, and West Delta Program. He and his staff work with more than 60 local agencies in the Sacramento-San Joaquin Delta and Suisun Marsh to maintain and improve levees, develop habitat,

and respond to flood emergencies threatening the Delta. He has experience working in the Department's Division of Safety of Dams, with United States Army Corps, and is a retired officer with 29 years in the Navy, having last served in the Civil Engineer Corps. His recent experience includes dam construction and geotechnical engineering with the Division of Safety of Dams and management of the Delta Levees Program for CALFED and the Department of Water Resources.

Tom Philp

Tom Philp is the Executive Strategist with the Metropolitan Water District of Southern California. For ten years he served as the senior associate editor on the editorial board of the Sacramento Bee. He drafted the newspaper's editorials on water, agriculture, forestry, energy, health, telecommunications and various regional issues. Previously he was a reporter for the Bee for six years, and prior to that, a reporter for the San Jose Mercury News for eight years. In 2004 Philp won three national journalism awards for an editorial series examining the spending behavior of California water districts. In 2005 he won the Pulitzer Prize for editorial writing for a series proposing to restore Yosemite National Park's Hetch Hetchy Valley.

Richard Roos-Collins

Richard Roos-Collins is Director of Legal Services at the Natural Heritage Institute. Since 1991, he has represented public agencies and non-profit organizations in water and energy matters. He was trial counsel for California Trout in the Mono Lake Cases, which established a rule of law that water rights must protect public trust resources. He represented conservation groups in PG&E's bankruptcy proceeding, resulting in a commitment to protect 140,000 acres of watershed lands in perpetuity. He is a founder and a director of Hydropower Reform Coalition; Chairman of the Low Impact Hydropower Institute; and Co-Chair, Agricultural Water Management Council. Before joining NHI, he was Attorney-Adviser, Office of General Counsel, U.S. Environmental Protection Agency (1986-1989) and Deputy Attorney General, California Department of Justice (1989-1991). He is a graduate of Harvard Law School (1986) and Princeton University (1975).

Thomas M. Zuckerman

Tom Zuckerman is co-counsel for the Central Delta Water Agency. He is an attorney and expert on California water law with special emphasis on the Sacramento-San Joaquin Delta region near Stockton and related issues. He is a member of the Bay Delta Public Advisory Committee, serving on committees and subcommittees dealing with levees, drinking water, ecosystem restoration, water supply and working landscapes. He also has provided input to the California Water Plan update, Bulletin 160. Though retired from the active practice of law, Mr. Zuckerman continues to serve on several corporate and other boards, including those of the University of Pacific Regents and Delta Health Systems. Mr. Zuckerman received his law degree from the University of California Boalt Hall School of Law.

WATER EDUCATION
FOUNDATION

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Water Education Foundation's Delta Vision Workshop
July 27, 2007
Fresno Convention and Entertainment Center
Exhibit Halls II and III
Fresno, CA

Sponsored by the Water Education Foundation

Cosponsored by the California Resources Agency

AGENDA

8:00	**Check-in**
8:45	**Welcome** Rita Schmidt Sudman, *Executive Director, Water Education Foundation*
9:00	**The Importance of the Delta: The View from the Valley** Congressman Jim Costa (D-Fresno)
9:30	**Developing a Delta Vision** Sunne Wright McPeak, *Delta Vision Blue Ribbon Task Force*
10:00	**BREAK (Charrette maps on display)**
10:30	**Assessing Risks to the Delta: The Delta Risk Management Strategy** David M. Mraz, *California Department of Water Resources*
11:00	**The Crisis in the Delta: What Does it Mean for a Long-Term Delta Vision?** Richard Roos-Collins, *Director of Legal Services, Natural Heritage Institute* Dale Melville, *Manager, Dudley Ridge Water District, and President, Provost and Pritchard Engineering Group, Inc.* Dale Myers, *former General Manager, Zone 7 Water Agency* Ara Azhderian, *Water Policy Administrator, San Luis and Delta Mendota Water Authority* **Moderator**: Tom Philp, *Strategist, Metropolitan Water District of Southern California and former Associate Editor,* The Sacramento Bee
12:30	**Lunch** **Small Group Discussions: Input on a Delta Vision** Participant, self-facilitated breakout groups
2:00	**Breakout Group Reports** Greg Bourne, *Managing Senior Mediator, Center for Collaborative Policy*

2:30 **The Value of the Delta to the Valley: How to Shape a Delta Vision**
Tom Zuckerman, *General Counsel, Central Delta Water Agency*
Phil Larson, *Fresno County Supervisor*
Jim Beck, *General Manager, Kern County Water Agency*
Debbie Davis, *Legislative Analyst, Environmental Justice Coalition for Water*
Moderator: Matt Kondolf, *Associate Professor of Landscape Architecture & Environmental Planning, UC Berkeley*

4:00 **Adjourn**

Delta Vision Workshop
Fresno, California
July, 27, 2007

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United States Senator Dianne Feinstein
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